Loring Development Authority of Maine	**)**	**Departmental**
Aroostook County	**)**	**Finding of Fact and Order**
Limestone, Maine	**)**	**Air Emission License**
A-649-71-G-R (SM)	**)**	

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

The Loring Development Authority of Maine (LDA) of Limestone, Maine has applied for a renewal of their current air emission license A-649-74-F-A/R issued June 26, 2002. The LDA has responsibility over the several buildings/hangers of the former Loring Air Force Base. The requested air emission license renewal is for the licensing of several #2 oil-fired boilers and heaters that are located throughout the complex. Reuse of the base's buildings is being considered by several federal, state, and private entities.

B. Emission Equipment

LDA is authorized to operate the following air emission units:

Fuel Burning Equipment

Base Building Number	Maximum Capacity (MMBTU/hr)	Fuel Type *	Maximum Firing Rate (gal/hr)
1850	6.15	#2 fuel oil, ASTM	43.9
3502	2 x 3.35	#2 fuel oil, ASTM	23.9 each
5902	9.70	#2 fuel oil, ASTM	69.3
5902	8.70	#2 fuel oil, ASTM	62.1
7220	6.70	#2 fuel oil, ASTM	47.9
7330	5.23	#2 fuel oil, ASTM	37.4

Fuel burning equipment continued….

8390	4.30	#2 fuel oil, ASTM	30.7
8710	6.40	#2 fuel oil, ASTM	45.7
8800	3.10	#2 fuel oil, ASTM	22.1
8250-1	6.4	#2 fuel oil, ASTM	45.7
8250-2	6.4	#2 fuel oil, ASTM	45.7

* The fuel fired will meet the ASTM D396 criteria for #2 fuel oil

There are also 22 relatively small boilers and water heaters located throughout the complex which are greater than 1.0 MMBtu/hr but less than 3.0 MMBtu/hr and fire ASTM #2 fuel oil. The actual size and location of these units can be found in the applicant's air emissions license file. These boilers, between 1.0 and 3.0 MMBtu/hr will be included in the total fuel use calculation for the facility.

Also, there are several other boilers which are under 1.0 MMBtu/hr and thus considered insignificant by the Department per 06-096 CMR 115 Appendix B. The small boilers less than 1.0 MMBtu/hr will be excluded when calculating the total fuel use for the facility and excluded from short term emission limits.

Diesel Units*

Base Building Number	Maximum Capacity (MMBTU/hr)	Fuel Type, %Sulfur	Maximum Firing Rate (gal/hr)
0291	0.9	#2 diesel, 0.05%	6.4
1203	3.5	#2 diesel, 0.05%	25.5
1805	6.1	#2 diesel, 0.05%	44.5
5002	1.8	#2 diesel, 0.05%	13.1
8203	6.0	#2 diesel, 0.05%	43.8
8390	0.9	#2 diesel, 0.05%	6.4
8700	2.3	#2 diesel, 0.05%	16.8

* All diesel engines at the LDA location are considered back-up. The licensed requirements are at least as stringent as the Air Bureau's SICE guidance for emergency back-up generators.

There are several additional diesel generators located on site that are less than 0.5 MMBtu/hr and operate only under emergency situations. These units, which fire 0.05% sulfur by weight, are considered insignificant per 06-096 CMR 115 Appendix B due to their size and limited use. Also, the generators in Building 7240, previously permitted in LDA's license, are now licensed under WPS New England Generation.

C. Application Classification

The application for LDA does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of current licensed emission units only and has been processed through Major and Minor Source Air Emission License Regulations, 06-096 CMR 115 (last amended December 24, 2005). With the fuel limit on boilers and the operating hours restriction on the emergency generators, the facility is licensed below the major source thresholds and is considered a synthetic minor.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Definitions Regulation, 06-096 CMR 100 (last amended December 24, 2005). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Boilers

LDA has several boilers that support various buildings on the former Loring Air Force Base (LAFB). Its mission is to redevelop the former base and to maintain the buildings in saleable or usable condition. An air emission license may or may not be required for each new entity, however, due to a delay in the conveyance of LAFB facilities, the current license issued to LDA include all boilers. This license shall be modified, amended, or transferred accordingly upon conveyance of the licensed boilers to separate entities.

The licensed boilers, rated between 1.0 MMBtu/hr and 9.7 MMBtu/hr, addressed in this Air Emission License renewal will combust fuel oil, which meets the criteria in

ASTM D396 for #2 fuel oil. The regulated pollutants emitted from the boilers are particulate matter (PM), particulate matter with a diameter smaller than ten microns (PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), and volatile organic compounds (VOC). Based on the size of these boilers and the quantity of pollutants that could potentially be emitted, it was determined by the Department that any additional pollution control devices would be economically unjustified.

A summary of the BPT analysis for LDA's boilers is the following:

1. The total fuel use for the facility shall not exceed 600,000 gallons per year of #2 fuel oil based on a 12 month rolling total.
2. The SO_2 emission limits are based on the firing of fuel which meets the criteria in ASTM D396 for #2 fuel oil.
3. Fuel Burning Equipment Particulate Emission Standard, 06-096 CMR 103 (last amended November 3, 1990) regulates PM emission limits. The PM_{10} limits are derived from the PM limits.
4. NO_x emission limits are based on data from similar #2 fired boilers of this size and age.
5. CO and VOC emission limits are based upon AP-42 data dated 9/98. NOx emissions are based on a BPT emission rate of 0.40 lb/MMBtu.
6. Visible emissions from the boilers shall not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a continuous 3-hour period.

C. Back-up Diesel Generators

The existing back-up diesel generators at the LDA have been located at the former base for several years. The limiting pollutant emitted from diesel generators is nitrogen oxides (NOx). To maintain the diesel generators' facility-wide NOx emissions to less than 20 tons per year, the maximum diesel fuel use shall be limited to 70,000 gallons/year. This corresponds approximately to an operational restriction of 450 hours per year for each unit.

Back-up generators are only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. Back-up generators are not to be used for prime power when reliable offsite power is available.

A summary of the BPT analysis for LDA's generators is the following:

1. The back-up generators shall fire only diesel fuel with a maximum sulfur content not to exceed 0.05% by weight.
2. The back-up generators shall each be limited to 450 hr/yr of operation based on a 12 month rolling total. Compliance shall be demonstrated by a written log of all generator operating hours.
3. 06-096 CMR 106 regulates fuel sulfur content, however in this case a BPT analysis for SO_2 determined a more stringent limit of 0.05% was appropriate and shall be used.
4. 06-096 CMR 103 regulates PM emission limits. The PM_{10} limits are derived from the PM limits.
5. NOx, CO, and VOC emission limits are based upon AP-42 data dated 10/96.
6. Visible emissions from the back-up generators shall each not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period.

D. Annual Emissions

LDA shall be restricted to the following annual emissions, based on a 12 month rolling total:

Total Licensed Annual Emissions for the Facility
(Tons/year)
(used to calculate the annual license fee)

	PM	**PM_{10}**	**SO_2**	**NO_x**	**CO**	**VOC**
Boilers	5.1	5.1	21.2	16.8	1.5	0.1
Generators	0.6	0.6	0.3	19.9	4.3	1.6
Total TPY	**5.7**	**5.7**	**21.5**	**36.7**	**5.8**	**1.7**

III. AMBIENT AIR QUALITY ANALYSIS

According to the 06-096 CMR 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Modeling and monitoring are not required for a renewal if the total emissions of any pollutant released do not exceed the following:

Pollutant	**Tons/Year**
PM	25
PM_{10}	25
SO_2	50
NO_x	100
CO	250

Based on the above total facility emissions, LDA is below the emissions level required for modeling and monitoring.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-649-71-G-R subject to the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

STANDARD CONDITIONS

(1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S.A. §347-C).

(2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]

(3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]

(4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]

(5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353. [06-096 CMR 115]

(6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]

(7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]

(8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]

(9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]

(10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been

necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]

(11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
   1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
   2. pursuant to any other requirement of this license to perform stack testing.

B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and

C. submit a written report to the Department within thirty (30) days from date of test completion.

[06-096 CMR 115]

(12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:

A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and

B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and

C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a

demonstration of compliance under normal and representative process and operating conditions.
[06-096 CMR 115]

(13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]

(14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]

(15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

SPECIFIC CONDITIONS

(16) **Boilers**

A. LDA is licensed to operate the following air emission units:

Base Building Number	Maximum Capacity (MMBTU/hr)	Fuel Type, %Sulfur	Maximum Firing Rate (gal/hr)
1850	6.15	#2 fuel oil, 0.5%	43.9
3502	2 x 3.35	#2 fuel oil, 0.5%	23.9 each
5902	9.70	#2 fuel oil, 0.5%	69.3
5902	8.70	#2 fuel oil, 0.5%	62.1
7220	6.70	#2 fuel oil, 0.5%	47.9
7330	5.23	#2 fuel oil, 0.5%	37.4

8390	4.30	#2 fuel oil, 0.5%	30.7
8710	6.40	#2 fuel oil, 0.5%	45.7
8800	3.10	#2 fuel oil, 0.5%	22.1
8250-1	6.4	#2 fuel oil, 0.5%	45.7
8250-2	6.4	#2 fuel oil, 0.5%	45.7

B. LDA is also licensed to operate several other boilers that have heat inputs less than 3.0 MMBtu/hr and fire fuel oil that meets the criteria in ASTM D396 for #2 fuel oil. The fuel use in these boilers will be included in the total licensed allowed fuel limit. [06-096 CMR 115, BPT]

C. Total fuel use for the boilers shall not exceed 600,000 gallons per year of #2 fuel oil. Compliance shall be demonstrated by fuel records from the supplier showing the quantity and type of fuel delivered. Records of annual fuel use shall be kept on a 12- month rolling total basis. [06-096 CMR 115, BPT]

D. Emissions shall not exceed the following:

Emission Unit	**Pollutant**	**lb/MMBtu**	**Origin and Authority**
Boiler (each)	PM	0.12	06-096 CMR 103(2)(B)(1)(a)

E. Emissions from each boiler shall not exceed the following [06-096 CMR 115, BPT]:

Pollutant	**lb/hour ***
PM	1.2
PM_{10}	1.2
SO_2	4.9
NO_x	3.9
CO	0.4
VOC	0.1

* The lb/hr emission limit is calculated using emission factors and based on the largest boiler operating at a maximum design capacity of 9.7 MMBtu/hr.

F. Visible emissions from each boiler shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 101]

(17) **Back-up Generators**

A. LDA is licensed to operate the following diesel generators:

Base Building Number	Maximum Capacity (MMBTU/hr)	Fuel Type, %Sulfur	Maximum Firing Rate (gal/hr)
0291	0.9	#2 diesel, 0.05%	6.4
1203	3.5	#2 diesel, 0.05%	25.5
1805	6.1	#2 diesel, 0.05%	44.5
5002	1.8	#2 diesel, 0.05%	13.1
8203	6.0	#2 diesel, 0.05%	43.8
8390	0.9	#2 diesel, 0.05%	6.4
8700	2.3	#2 diesel, 0.05%	16.8

B. LDA shall limit Back-up Generators to 450 hr/yr of operation (based on a 12 month rolling total). An hour meter shall be maintained and operated on the Back-up Generators. [06-096 CMR 115, BPT]

C. Back-up Generators shall only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. Back-up Generators shall not to be used for prime power when reliable offsite power is available. A log shall be maintained documenting the date, time, and reason for operation. [06-096 CMR 115, BPT]

D. Back-up Generators shall fire #2 fuel oil with a sulfur limit not to exceed 0.05% by weight. Compliance shall be based on fuel records from the supplier showing the quantity of fuel delivered and the percent sulfur of the fuel. [06-096 CMR 115, BPT]

E. Emissions from each generator shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Generator (each)	PM	0.12	06-096 CMR 103(2)(B)(1)(a)

F. Emissions from each generator shall not exceed the following [06-096 CMR 115, BPT]:

Pollutant	lb/hour *
PM	0.7
PM_{10}	0.7
SO_2	0.3
NO_x	26.9
CO	5.8
VOC	2.1

* The lb/hr emission limit is calculated using emission factors and based on the largest generator operating at a maximum design capacity of 6.1 MMBtu/hr.

G. Visible emissions from each Back-up Generator shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 101]

(18) **Annual Emission Statement**

In accordance with Emission Statements, 06-096 CMR 137 (last amended July 6, 2004), the licensee shall annually report to the Department the information necessary to accurately update the State's emission inventory by means of:

1) A computer program and accompanying instructions supplied by the Department;

   or

2) A written emission statement containing the information required in 06-096 CMR 137.

Reports and questions should be directed to:

Attn: Criteria Emission Inventory Coordinator
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017
Phone: (207) 287-2437

The emission statement must be submitted by July 1 or as otherwise specified in 06-096 CMR 137.

(19) LDA shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S.A. §605).

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2008.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____
DAVID P. LITTELL, COMMISSIONER

The term of this license shall be five (5) years from the signature date above.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: March 16, 2007
Date of application acceptance: March 30, 2007

Date filed with the Board of Environmental Protection: _____

This Order prepared by Edwin Cousins, Bureau of Air Quality